Chapter 2

Deregulation That Frees the Economy

By limiting the costs of unnecessary regulation, by reviewing and eliminating ineffective rules whose costs exceed their benefits, the Administration's agenda of deregulation is unleashing the talents of the American people and the true potential of American businesses. Although some regulation can be beneficial—for example, to protect the environment and health—when job creators must abide by overly burdensome rules, Americans lose opportunities to transform their own ideas into new businesses and into even more opportunities.

Regulation's dynamism-dampening effects are evident in empirical analyses of its influence on the economy. Increases in regulation decrease rates of new business entry, and newer firms tend to make greater contributions to economy-wide productivity, which in turn means higher wages for employees. Increased regulation may even explain a nontrivial portion of the productivity slowdown observed in recent years, which has exacerbated the stagnation of wages. Moreover, the effects of regulation extend beyond business dynamics.

For example, overregulation has a negative impact on people's ability to relocate to where jobs exist. Geographic mobility in the United States has ebbed to an all-time low, as regulatory barriers, especially at the State and local levels, make living in high-priced cities unattainable for many Americans. According to one estimate, for instance, the relaxation of restrictive land-use regulations in just the three cities of New York, San Jose, and San Francisco between 1964 and 2009 would have increased the 2009 U.S. gross domestic product (GDP) by 8.9 percent, and would have given more Americans the freedom of movement that has been such a tradition in the United States. Additional barriers to mobility

come from, among other things, State-level occupational licensing restrictions that prevent Americans from pursuing opportunities. These regulatory distortions of the labor allocation across borders also cause economic distortions, along with regulation's overall negative impact on job growth. In addition to preventing people from moving to new jobs, regulation may prevent jobs from being created in the first place, and can reduce the number of jobs in the overall economy.

To put the economic burden of regulation into context, consider a thought experiment: Imagine that each of the 9.8 billion hours devoted to compliance paperwork in fiscal year (FY) 2015, according to the Office of Management and Budget, were instead used by employees to create output equal to average hourly earnings. These earnings would total $245.1 billion, equal to 1.35 percent of that year's GDP and 41.6 percent of that year's Federal national defense budget.

To prevent these unintended consequences, the Administration is dedicated to eliminating excessive regulation. In the Administration's first eight months, Federal agencies issued 67 deregulatory actions and only 3 regulatory actions, far outpacing the goal of 2 deregulatory actions for every regulatory action. This effort has created more than $8.1 billion in present-value cost savings. Given the evidence regarding the impact of poor regulation on the economy, continued deregulatory efforts in the coming years can lead to further cost savings for both firms and consumers as the U.S. economy grows.

Government regulation affects firms and individuals pursuing various types of economic activity. Examples of firm-level activity influenced by government regulation include how and when one firm may merge with another, how public utilities set prices, the amount of pollutants a firm may generate in the course of producing its goods, and how much risk a firm in the financial sector can take on without endangering the wider financial system. Examples of the impact of regulation in the lives of individuals come in

the form of things like the seatbelts and airbags found in automobiles and in the insurance policies that individuals buy.

Regulations have intended as well as unintended consequences. In some cases, the intended and unintended benefits of a regulation outweigh its intended and unintended costs. The benefits of regulations that outlaw child labor, for example, outweigh the costs they impose. In other cases, however, the intended and unintended costs of a regulation may instead outweigh its benefits. And the quantity of regulations in the United States, regardless of how they are measured, has rapidly increased in recent decades. In light of the reality that regulations can impose costs that exceed their benefits, this proliferation of regulations underscores the importance of ensuring that existing regulations do not impose excessive costs.

The Trump Administration has prioritized the identification—and removal—of regulations that fail to generate benefits that outweigh their costs. This agenda of deregulation stands poised to increase economic growth and improve the economic opportunities available to American businesses and employees. Economists and other academics have, over the years, produced a body of literature on regulation that provides the economic rationale for the Administration's current agenda of deregulation. After all, as Gayer and Viscusi (2016, 1) note, the intellectual basis of cost/benefit assessments of government regulation date back to Jeremy Bentham's 1776 adage that "it is the greatest happiness of the greatest number that is the measure of right and wrong."

To put this Administration's regulatory priorities in context, this chapter first explores the theoretical justifications for regulation. Then it synthesizes the economics literature's empirical documentation of the effects that regulations have on economic activity in places like the United States. These empirical analyses demonstrate the benefits that can be generated by deregulation along the lines of the Trump Administration's agenda. Finally, the chapter describes the actions undertaken by the Administration so far in order to deliver these benefits to the American people.

Theories of Efficient and Inefficient Regulation and Deregulation

Classical economic theory argues that economic agents, whether firms or individuals, acting in their own self-interest (which they are in the best position to know) will, via voluntary trading, come up with the most efficient allocation of goods and services. Such an allocation of resources will maximize social welfare. In this theoretical world, the only role for the government is to protect property rights—no regulation of a market is necessary. So if this is the case, why do we have regulations?

Two broad and influential schools of thought lay out the economic basis for regulation. For the first school, regulations improve welfare by correcting

"market failures." For the second one, in additional to correcting market failures, regulations can improve welfare by addressing "internalities," which entails correcting individuals' or firms' failures to behave in their own (i.e., internal) self-interest.

Regulatory Benefits

The scope of benefits one counts in justifying the creation or the removal of a regulation varies between these two different views. The set of benefits generated by a regulation, after all, depends at least in part on the nature of the economic activity affected by the regulation.

In the first, and traditional, view of the conditions whereby regulations can improve economic welfare, they correct for the failures of markets to generate the socially optimal outcome (e.g., when they address market failures). The economics profession has identified the circumstances in which market failures can result. These include when firms have excessive market power, preventing competition within a market; when there are externalities imposed by one individual or firm on another; and when there are information asymmetries between different market participants. The textbook example of a market failure due to the existence of market power and the absence of competition comes from the leverage of the Standard Oil Company, a firm that once held a monopoly on the production of oil in the U.S. The textbook example of a market failure due to an externality that leads to overproduction in the absence of regulation may come from the example of pollution in the environment, because firms and the consumers of their products do not fully pay for the costs that the pollution they generate impose on others. An example of information asymmetry is the market for used cars, because a car dealer may know the defects of a car better than a buyer. As a result of this asymmetry, in the absence of regulation, the market for used cars may not produce efficient outcomes.

In all these cases, the measure of a regulation's benefits and costs must be in accord with their effects on the entire economy, rather than vis-à-vis the specific firm or individual that produces or consumes the product that the regulation affects. The regulatory breakup of Standard Oil generated benefits for U.S. consumers and other U.S. producers that exceeded the costs to Standard Oil. U.S. citizens writ large have benefited from reduced pollution of the environment, despite the fact that reducing it has made both producers' costs and consumers' prices higher than they were in the absence of pollution regulations. Likewise, U.S. consumers, rather than used car dealers, benefit from steps to ensure that used car dealers do not exploit asymmetries of information by reducing the costs of information for buyers.

In contrast, the second set of economic rationales go much further than market failure rationales in determining the benefits of regulation. Rather than addressing the externalities discussed above, regulations can also improve

welfare by correcting for "internalities" that lead individuals to make decisions that do not serve their own best interests. Those who suggest that internalities can render regulation welfare-improving depend on evidence in the behavioral economics literature purporting to document cognitive biases in support of this proposition. (For a representative exposition of the internalities-based school of thought on regulation, see Allcott and Sunstein 2015; and for a representative exposition of its contrasts with the traditional view of regulation, see Mannix and Dudley 2015.)

The departure of the internalities-based approach to regulation from the approach that centers on the redress of market failure is not merely an abstraction. Indeed, some regulations in recent years have been justified on the basis of cost/benefit analyses that include internalities. An example comes from a regulation on energy conservation standards for commercial refrigeration equipment. As part of the Energy Policy and Conservation Act of 1975, this regulation set energy efficiency standards for commercial refrigerators, effectively circumscribing the type of commercial refrigerators that would be available on the market. From a decrease in the set of possible refrigerators available to choose from in the first place, the cost/benefit analysis assumes that those who operate commercial refrigerators would experience a decrease in the cost of operating them over the lifetime of the product. To assert that commercial refrigerator operators would benefit from a restriction on the set of available commercial refrigerators, one would need to assume that some subset of commercial refrigerator operators would choose some subset of commercial refrigerators that makes them worse off relative to what they could have chosen in the absence of the regulation. This regulation, then, appears to justify its benefits in part on the basis of its purported remedying of an "internality" suffered by the operators of commercial refrigerators.

Nonetheless, whether internalities render regulation welfare-improving as much as the proponents of this school of thought would suggest remains controversial. Some question whether the government regulators themselves suffer from behavioral biases that distort their decisionmaking (e.g., Viscusi and Gayer 2015). In this view, regulation serves to increase institutional behavioral biases rather than overcome them. Others question the reliability of the research that purports to document the existence of the cognitive biases that give rise to alleged internalities (e.g., Shrout and Rodgers 2017).

The idea that a regulation may generate benefits that accrue directly to the actors that are the focus of the particular regulation, rather than to other participants in economic activity, is not as new as the internality-focused school of thought and the rise of the behavioral economics that is its foundation. At least since the 1990s, some have argued that the regulated experience net benefits from regulation, though the focus tended to be on firms rather than on individuals. This corner of the economics literature has focused, in particular, on the possibility that environmental regulations can incentivize

firms to innovate, offsetting compliance costs through increased efficiency and enhanced productivity (Porter 1991; Porter and Van der Linde 1995; Ambec et al. 2013). This is formalized in the economics literature as the Porter Hypothesis, which can be presented in several different forms.

The first, or "narrow," form of the Porter Hypothesis distinguishes between market-based instruments and prescriptive regulation. The use of market-based instruments incentivizes firms to innovate by working within a competitive market, while prescriptive regulation discourages innovation by defining how activities should be undertaken. This form emphasizes that flexible regulatory policies are more efficient than prescriptive ones.

The "weak" form of the Porter Hypothesis claims that environmental regulation results in increased innovation. The "strong" form of the Porter Hypothesis not only claims that well-designed environmental regulation can increase innovation, but also can increase a firms' competitiveness and productivity enough to offset compliance costs. However, empirical evidence supporting Porter's view is anecdotal, and more rigorous empirical studies have provided mitigating and even contradictory results (Lanoie, Patry, and Lajeunesse 2008; Jaffe and Palmer 1997; de Vries and Withagen 2005; Brunnermeier and Cohen 2003). This lack of clear evidence in support of the Porter Hypothesis makes its use in the estimation of regulatory benefits and costs difficult to justify.

Regulatory Costs

Regulations can impose costs through a number of different channels. First, there is the cost of complying with a regulation that businesses pay, both in demonstrating that they are complying with the regulation and in changing their production processes to do so. Second, though these regulations are often placed on businesses, those who buy their products will pay part of the regulations' costs. Increases in firms' costs via regulation will increase the prices of products for consumers in a competitive market (as with the Fiduciary Rule; see box 2-1). Third, there are costs that accrue to would-be consumers who do not engage in a transaction, due to the effect of a regulation, or to would-be businesses that cannot enter a market or stay in operation due to the existence of a regulation. Fourth, costs can accrue to would-be employees if firms decrease hiring in response to a regulation. Of particular importance, for an externality like pollution, if these costs are equal to or less than the benefits of reduced pollution, then the externality is appropriately internalized and social welfare increases. But if this is not the case, the regulation does not improve social welfare.

Of all regulatory costs, an easily identifiable one is the cost of collecting information used by the government to determine compliance with a regulation. The Paperwork Reduction Act of 1980 was designed to reduce the total paperwork burden that the Federal government imposes on private businesses

Box 2-1. Determining the Future of the Fiduciary Rule

In 2015, the U.S. Department of Labor released an updated rule proposal to amend the definition of a fiduciary under the 1975 Employee Retirement Income Security Act, known as ERISA. This rule change would expand those with a fiduciary duty to include those providing investment advice to a retirement plan, participant, or individual retirement account owner. Imposing a fiduciary duty requirement has a clear benefit, in that financial advisers would be required to act in the best interest of their clients. Also, there is a large academic literature finding that conflicting investment advice imposes substantial costs on retirement savers (Chalmers and Reuter 2010; Christoffersen, Evans, and Musto 2013; Del Guercio and Reuter 2014; Foerster et al. 2017). However, the rule would also impose large costs.

The Fiduciary Rule would immediately make an entire class of retirement planning professionals comply with those responsibilities associated with being a fiduciary. Given the rule's ambiguous language, it also creates regulatory uncertainty as to whether the fiduciary duty exists for certain investment educators and investment advisers. This increases the costs to provide retirement investment advice, as advisers are now forced to comply with a whole host of new regulations. This cost will be passed onto consumers in the form of reduced availability of investment education and advice, or higher fees for said advice. The industry points out that the additional compliance costs may make it unprofitable to provide individual investment advice for small retirement accounts.

In response to these concerns, President Trump ordered the Department of Labor to study if the fiduciary rule harms investors by decreasing access to retirement savings products, information, or related financial advice. Additionally, the department is asked to determine if the Fiduciary Rule has disrupted the retirement services industry. The deadline for compliance with the prohibited transaction exemptions accompanying the Fiduciary Rule has been postponed until July 2019. For advisers, this delay will allow time to comply with the extensive requirements associated with being a fiduciary. Consumers of retirement investment advice should not see dramatic changes in the availability of retirement products or advice during this period. The Administration is continuing to review this rule, and hopes to tailor it more narrowly so it has a less dramatic impact on the retirement investment market.

and citizens. The act imposes procedural requirements on agencies that wish to collect information from the public, including an estimate of the hours necessary to collect the required information and an estimate of the personnel cost that reflects the burden of the collection. As part of the Paperwork Reduction Act, agencies must seek and consider public comment on proposed collections of information with 10 or more respondents, and receive approval

from the Office of Management and Budget before beginning to collect information from the public.

In spite of the Paperwork Reduction Act, the Office of Management and Budget's estimated paperwork burden for regulatory compliance has increased steadily over the years. This can be seen in the blue trend line in figure 2-1—but with one important caveat: the methods used to capture total paperwork burden changed between FY 2009 and FY 2010. Hence, it is not possible to compare values across these two periods. In fact, doing so would suggest that the burden barely changed between FYs 2009 and 2015. But when one looks at the hours before and after this break in the data, it is clear that the total burden increased in both. It went from 7.0 billion hours in FY 1997 to 9.8 billion hours in FY 2009—an average annual increase of 2.8 percent. It then went from 8.8 billion hours in FY 2010 to 9.8 billion in FY 2015—an average annual increase of 2.2 percent. The red trend line in figure 2-1 looks at the total paperwork burden coming from the Treasury Department alone. Paperwork from the Treasury, which accounts for more than 70 percent of the total burden every year between FYs 1997 and 2015, follows a similar trajectory during the two periods.

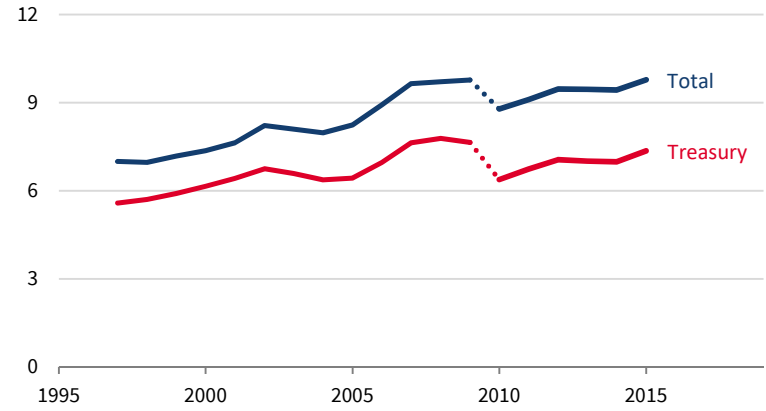
To put the economic impact of the paperwork burden into context, consider a thought experiment: Imagine that each of the 9.8 billion hours devoted to paperwork in 2015 instead were used by employees to create output equal to their average hourly earnings. These earnings would total $245.1 billion, an amount equal to 1.35 percent of that year's GDP and 41.6 percent of that year's Federal national defense budget. One potential benefit of the Administration's deregulatory efforts will be to slow down the growth in costs related to the paperwork burden.

In some cases, regulators underestimate costs or additional, unanticipated costs arise. Although the original regulatory impact assessment may have estimated a net benefit from a regulation, rising costs over time could reduce or eliminate this benefit. This often occurs in situations where technology brings unanticipated change to a market that is heavily burdened by regulation. Such unanticipated or underestimated costs are often cited as a justification for instituting periodic retrospective reviews of existing regulation.

In addition, it is worth noting the distinction between the direct and indirect costs imposed by a regulation. A firm's direct costs are those that are attributed directly to complying with a regulation—for instance, its costs to hire a compliance officer to handle the regulatory paperwork. Its indirect costs are the opportunity costs of investing its funds in a regulatory compliance activity that could have been used for another part of its business. For instance, if a firm must invest $1 million in a compliance activity, its indirect cost of compliance is the profit that the $1 million could have generated if it had been invested in a revenue-producing activity. These costs are difficult to measure, given that it is difficult to know what a firm would have done with funds allocated to financing

Figure 2-1. Total Paperwork Burden Hours, FYs 1997–2015

Hours (billions)



Source: Office of Management and Budget, Information Collection Budget.
Note: At the end of 2006, the Office of Management and Budget introduced an electronic system to process agencies' paperwork burden estimates. Because the system was not fully implemented until the end of 2007, values from about this time may contain errors, and comparison between prior values and values afterward may not be reliable. Between 2009 and 2010, values underwent a one-time adjustment, affecting all future values. The FY 2015 estimate will be updated in the FY 2016 report.

compliance activity if those funds had been used elsewhere. Nonetheless, indirect costs are imposed on the economy by regulation.

The Impact of Regulation

There is a sizable body of economics literature on regulation's impact on various measures of a country's economic health. Deriving a causal estimate of the effect of regulation is difficult, in part due to the difficulty of formulating a reasonable measure of regulation. Despite this, the economics literature does include efforts by researchers to overcome such difficulties and document the economic effects of regulation. Estimates of the effects' magnitude vary substantially, but this literature does highlight cases where regulation lowers the level and rate of economic activity and can harm firms, employees, and consumers.

Measurement

Many of the methods used by researchers to quantify the stock of current regulations or the flow of all regulations are imperfect. Nonetheless, in spite of these imperfections, these measures do allow one to draw at least some inferences about regulation and its effects. Moreover, measurement error in regulation measures will, in many cases, bias estimates of the impact of regulation toward zero. To the extent that the literature finds effects, then these effects should be notable to analysts.

One common variable used to study the impact of regulation is the number of pages in the *Federal Register* or the *Code of Federal Regulations*—two measures with known limitations. For example, one could object to measurements derived from either on the grounds that they fail to measure the semantic content of what the text says (e.g., a few paragraphs of text could prohibit a vast amount of economic activity, or vice versa). Even then, these caveats illustrate the specificity of the conditions in which measurement error invalidates attempts at statistical inference. For instance, whether measurement error causes an attempt at statistical inference to generate a "false positive" (e.g., the effect of regulation on growth) depends on how the measurement error correlates with the other variables relevant to the statistical technique at hand. Thus, the presence of measurement error requires careful consideration of appropriate statistical analysis but does not necessarily eliminate the usefulness of these imperfect measures of regulation.

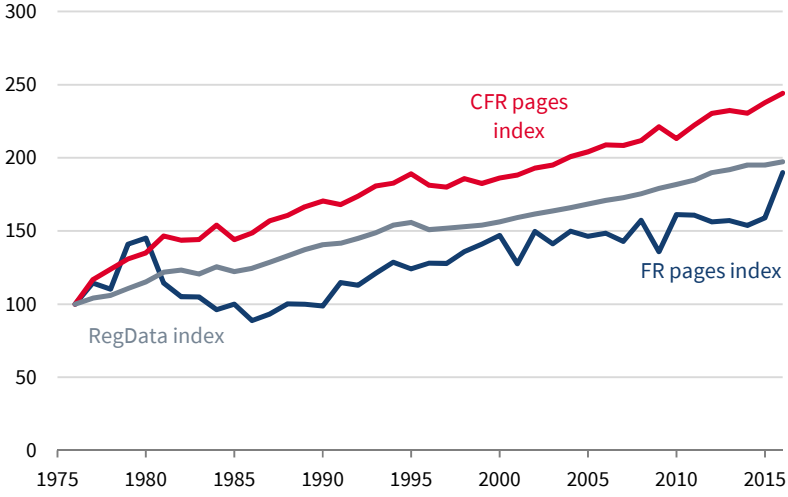
As an alternative solution to a lack of a good measure of total regulation, researchers have introduced RegData, an index derived from a textual analysis of the *Code of Federal Regulations*, to more accurately measure the quantity and impact of regulation (McLaughlin and Sherouse 2017; RegData is maintained by the Mercatus Center at George Mason University). RegData breaks the data down by paragraph and by title, allowing analysis by different aggregation levels; and it then counts the number of keywords that are indicative of restrictions on the economy—such as "shall," "must," "may not," "required," and "prohibited." RegData also closely tracks the number of pages in the *Code of Federal Regulations*, from which it is derived.

In spite of the imperfections of any one measure, measures of regulation in the United States as a whole seem to support the idea that regulation has increased in the country. Figure 2-2 illustrates the growth measures of total regulation—using the *Federal Register*, the *Code of Federal Regulations*, and the sum of all industry-relevant restrictions from RegData. Each series is represented as an index, such that 1976 is equal to 100. Series are set to begin in 1976 to reduce the impact of changes in the underlying construction of the *Federal Register* in earlier years. Despite their shortcomings, each measure shows an increase in the quantity of regulations of almost 2 to 2.4 times over the last 40 years.

Another alternative is to measure the subset of regulations that are classified as "economically significant"—which the 1993 Executive Order (EO) 12866 defines as those estimated to have "an annual effect on the economy of $100 million or more." Figure 2-3 highlights the economically significant final rules published by selected agencies and administrations. A total of 29 economically significant final rules were published in the first year of the George W. Bush Administration, and 45 were published in the first year of the Obama Administration. In the first year of the Trump Administration, agencies published only 18 final rules—most at zero net cost.

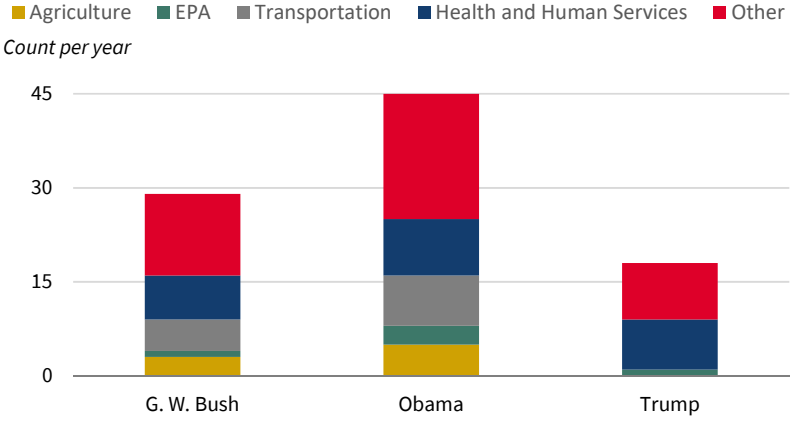
Figure 2-2. Estimated Measures of Regulation, 1976–2016

Index (1976 = 100)



Sources: GW Regulatory Studies Center; McLaughlin and Sherouse (2017).
Note: CFR = *Code of Federal Regulations*. FR = *Federal Register*. RegData index is the sum of all industry-relevant restrictions.

Figure 2-3. Published Economically Significant Final Rules by First Year of a Presidential Term



Sources: RegInfo; Office of Management and Budget.
Note: A "Presidential term" is defined as starting on January 20 and ending on January 19. President Trump's term accounts for regulation through January 19, 2018. The George W. Bush Administration's counts began before an electronic system was implemented by the Office of Management and Budget in 2004 and should be compared with later Administrations' counts with caution.

Additional measures of the regulatory burden include survey-based indices that allow regulations to be compared across countries. For example, the World Bank's worldwide governance indicators measure six dimensions of governance, including regulatory quality. This measure captures "perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development" (Kaufmann, Kraay, and Mastruzzi 2011, 233). The World Bank also publishes Ease of Doing Business rankings, calculating each country's distance from benchmark economies (those that implement the best regulatory practices). Comparing these rankings over time and across countries highlights the relative changes of each economy's regulatory scheme. In the most recent data, the United States was 6th out of the 190 rated countries in the Ease of Doing Business ranking, lagging behind New Zealand, Singapore, Denmark, South Korea, and Hong Kong.

The Organization for Economic Cooperation and Development (OECD) also publishes a series of regulation-related indices, including the Indicators for Regulatory Policy Governance (known as iREG), Indicators of Regulatory Management Systems, Product Market Regulation indicators, Competition Law and Policy Indicators, Indicators for Employment Production, and the FDI [Foreign Direct Investment] Regulatory Restrictiveness Index. Each measures evaluates a different aspect of regulation. For example, the Product Market Regulation indicators assess how regulation affects competition in the product market, with the understanding that increased competition results in a more robust economy and greater economic growth. Meanwhile, the FDI Regulatory Restrictiveness Index measures statutory restrictions on FDI for more than 50 countries. This ranking relies on four measures: equity restrictions, screening and approval requirements, restrictions on foreign personnel, and such other restrictions as limits on land purchases and the repatriation on profits.

In one ranking in particular, the OECD Product Market Regulation indicator, the United States tends to be more-regulated than its OECD peers. The OECD's calculations place the United States 27th out of 35 countries, behind France, Chile, and the Czech Republic (Koske et al. 2015; see figure 2-4). This suggests that the United States has the opportunity to exploit the gains from deregulation in product markets.

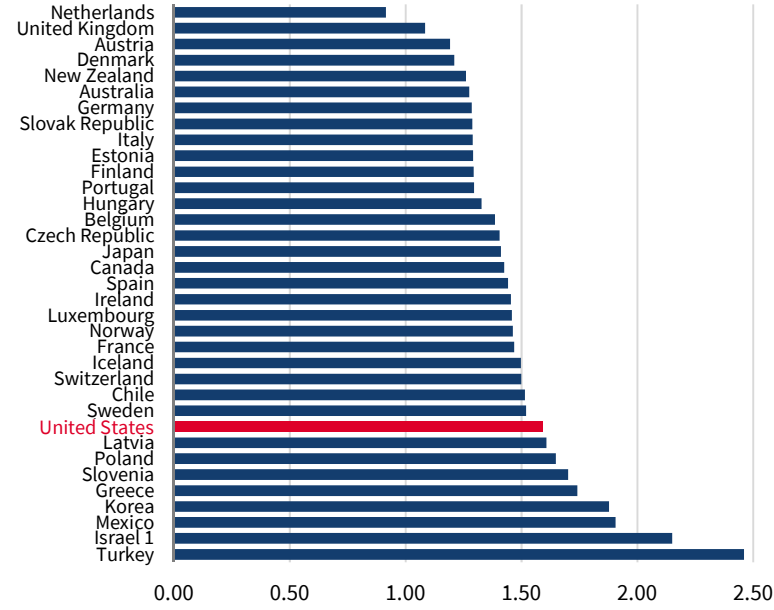
Researchers typically use these indices to compare regulatory regimes across countries. As long as the measurement error of the index does not systematically vary across the countries included in the analysis, cross-country analyses that draw on these regulation indices to make inferences about growth will be as reliable as any other inference from cross-country data.

Aggregate Growth

Estimates of the impact of regulation on economic growth vary, not least because estimated effects will depend on the category of regulation considered,

Figure 2-4. Product Market Regulation, 2013 (35 OECD Countries)

Index scale from 0 to 6 (least to most restrictive)



Sources: OECD; Koske et al. (2015).

the nonrandomness of regulatory implementation or withdrawal, and possible general equilibrium effects that complicate identification. Nonetheless, there is evidence within the academic literature supporting the conclusion that higher levels of regulation in the aggregate can result in lower economic growth.

Djankov, McLiesh, and Ramalho (2006) estimate that moving from the 25th to the 75th percentiles on the World Bank's Ease of Doing Business Index increases average annual per capita GDP growth across 10 years by 2.3 percentage points. Loayza, Oviedo, and Servén (2010) and Jacobzone and others (2010) similarly observe a negative relationship between regulation and economic growth. An OECD study by Egert and Gal (2016), meanwhile, estimates that a 0.31-point reduction in a country's score on the OECD's 6-point energy, transportation, and communications indicator of regulatory intensity in product markets is associated with a 0.72 percent boost to GDP per capita over 5 years. The estimated effect rises to 1.02 percent over 10 years, and 2.09 percent in the long run. Egert and Gal also estimate that 0.30-point reduction in a country's score on the OECD's 6-point employment protection laws indicator of regulatory intensity in labor markets is associated with a 0.22 percent increase in GDP per capita over 5 years, rising to 0.57 percent over 10 years and 1.83 percent in the long run.

Ciccone and Papaioannou (2007) measure the burden imposed by regulation across countries by constructing a proxy for regulation's red tape, which

reflects the time it takes to start a new business in each country. They find that responsiveness to industry-specific global demand shocks, as measured by new firm entrants, increases as the volume of red tape decreases. Alesina and others (2005) also find that more stringent regulation of product markets has large and negative effects on aggregate investment. Finally, Justesen (2008) observes that, in contrast to other variables plausibly determined by governments, the level of regulation is correlated with subsequent economic growth in a panel of countries spanning the period from 1970 through 1999.

One primary channel through which increased regulation appears to affect growth is through its effect on productivity growth. Exploiting a new time series measure of the extent of regulation by the U.S. Federal government, Dawson and Seater (2013) find that regulation lowers total factor productivity (TFP) by distorting the mix of inputs in production, thereby adversely affecting overall output growth. Bailey and Thomas (2017), meanwhile, find that regulation may also affect productivity through its effect on firm entry and exit. Using a fixed-effects model, they observe that industries with more Federal regulation experienced fewer new firm births and slower employment growth between 1998 and 2011, and that large firms are less likely to exit more heavily regulated industries than small firms. More specifically, they estimate that a 10 percent increase in the intensity of regulation leads to a 0.47 percent reduction in new firm births.

At the more local level, Hsieh and Moretti (2017) estimate that with decreased zoning restrictions in three cities—New York, San Jose, and San Francisco—the growth rate of aggregate output could have increased by 0.795 percent to 1.49 percent a year between 1964 and 2009, thereby increasing GDP in 2009 by 8.9 percent. The authors find that zoning restrictions increased the spatial misallocation of labor, with the result of lowering labor productivity growth. Herkenhoff, Ohanian, and Prescott (2017) reach similar conclusions, finding that U.S. labor productivity and consumption would be, respectively, 12.4 and 11.9 percent higher if all states moved just halfway from their current land-use regulations to the current Texas level.

Although local zoning restrictions specifically may lie beyond the scope of Federal policy, we can apply estimates from the academic literature on regulation generally to create a back-of-the-envelope projection of the impact of the current Administration's deregulatory agenda. Because Égert and Gal (2017) suggest that decreasing a country's Product Market Regulation Index by 0.31 (the typical decrease in an episode of deregulation in OECD countries) would increase its GDP per capita by 1.02 percent within 10 years, we can apply their estimate to moving the United States from 27th in the Product Market Regulation Index to 1st. If the United States achieved the same level of product market regulation as the Netherlands from structural reform, U.S. real GDP would increase 2.2 percent over 10 years, assuming a constant population growth rate and constant inflation. If the United States instead implemented

the typically observed reform—decreasing its index by 0.31—U.S. real GDP would increase by 1.0 percent over 10 years. And if the U.S. moved up the ranking a few places to achieve Canada's level of product market regulation, U.S. real GDP would increase by 0.5 percent over the same time frame.

Business Dynamics

Evidence across sectors indeed appears consistent with what one would expect if an increase in regulatory burdens were impeding the dynamism of American business. Regulations that impose fixed costs on businesses double as barriers that prevent new businesses from entering markets and competing with established firms.

Trends across a number of indicators of business dynamism appear consistent with what one would expect if regulatory burdens were increasing, in a trend that favored large, well-positioned businesses over newer and smaller firms. First, the net rate of new establishment creation in the United States has trended downward over time (e.g., Decker et al. 2014; Hathaway and Litan 2014). Second, the degree of competition appears to have decreased in most industries in the United States (Gutierrez and Philippon 2017). And this decrease coincides with an increase in firm profits coupled with stagnating investment; profits are rising, yet firms seem to be investing less in capital assets that produce their goods and services. In particular, for companies to invest in the United States, the break-even rate of return on a U.S. capital investment must be higher than in alternative, lower-regulation jurisdictions. If firms' regulatory costs increase, fewer companies are likely to invest in the United States. The economics profession is only beginning to develop an understanding of the causes of these trends.

However, some evidence points to increases in Federal regulation as a causal mechanism that could explain the apparent decline in new firm creation and decrease in new firm dynamism. Bailey and Thomas (2017) exploit the variation in regulatory trends across industries at the level of the four-digit North American Industry Classification System code offered by the RegData database. The baseline specification of Bailey and Thomas (2017) includes year and industry fixed effects, allowing the isolation of variation in Federal regulations that are idiosyncratic to a given industry within a given year—and addressing the concerns raised by estimates of Federal regulations' effects, based only on variation across time. And according to the results from this approach developed by Bailey and Thomas, an increase in Federal regulations tends to decrease rates of new business entry. Bailey and Thomas also note that large, established firms tend to be less likely to exit when their industry has more regulation. Though the complexity of trends in the dynamism of America's businesses belies the possibility that any one piece of evidence could have the final word, Bailey and Thomas nonetheless points to a causal

link between the decline in U.S. start-up rates and competition and increased Federal regulation.

Even if evidence for the relevance of government regulation to contemporary business dynamics may be new, the possibility that government regulation would reflect the preferences of interest groups like those representing established businesses rather than merely maximize aggregate social welfare has a long history in the economics profession (Stigler 1971; Peltzman 1976; Becker 1976). Meanwhile, measures of policy uncertainty have trended upward over time since the 1960s, and additional research has documented that firms appear to vary their lobbying expenditures and political donations in response to fluctuations in political risk (Baker, Bloom, and Davis 2016; Hassan et al. 2017).

Also, according to new research, the existence of regulatory barriers to entry that influence rates of business formation would have an impact on more than the distribution of benefits between firms. Research suggests that the contributions of firms to productivity tend to decrease rapidly as firm age increases. Established businesses whose longevity may be prolonged by the existence of regulations tend to make less of a contribution to productivity than the new firms that could replace them, according to new research from Alon and others (2017). They estimate that the aging of established firms since 1980 had by 2014 lowered aggregate productivity to 3.1 percent below the level where it would otherwise have been. To the extent that government regulation has decreased start-up rates and prolonged the existence of established firms—as Bailey and Thomas's (2017) results suggest—then regulation may have generated a causal contribution to the decline in productivity in the United States.

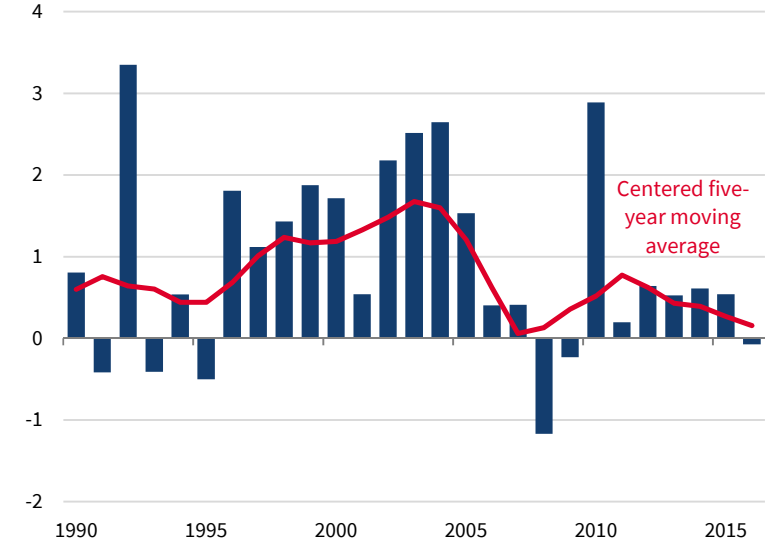
Productivity

The influence of regulation on business dynamics, however, is only one of the possible channels through which regulation can exert an effect on productivity. A useful measure for exploring these channels is TFP, which is the portion of output not explained by the quantity of inputs, measuring how efficiently and intensely inputs are used. Annual TFP growth for the private business sector averaged 1.7 percent from 1995 to 2005 but slowed down after the Great Recession, growing 0.05 percent on average annually from 2007 to 2016. This has been the slowest TFP growth rate of any recent business cycle expansion. In 2016, TFP decreased 0.1 percent for the private business sector, its first decline since 2009. Figure 2-5 illustrates these trends in TFP growth.

Although changes in productivity—both increases and decreases—have been explained by a wide variety of factors, regulation has been shown to be an important determinant of productivity (Baily 1986; Maddison 1987). Because TFP is measured as the output per combined inputs, an increase in regulatory

Figure 2-5. Total Factor Productivity Growth, 1990–2016

Percent change (annual rate)



Source: Bureau of Labor Statistics, Multifactor Productivity Tables.

costs results in an increased level of total inputs for the same level of output, decreasing the ratio of output to inputs.

For example, hiring a compliance officer increases labor input, but may not increase a firm's output, as hiring a worker in another role would do. Thus, the compliance burden lowers measurements of productivity by inducing firms to allocate funds to compliance that generate no output included in the TFP measure, rather than to output-generating activity included in the measure. And CEA analysis suggests that the allocation of funds toward compliance is nontrivial in magnitude. Using Bureau of Labor Statistics data on compliance officer wages (Ruggles et al. 2017), CEA estimates that businesses spent $19.8 billion in 2016 on compliance officers' wages—which constitutes a real increase of 202 percent since 2000, with compliance costs growing an average of 7.16 percent each year.

Regulation can also result in disincentives to invest and innovate, further decreasing TFP. If regulation diverts funding from otherwise productive uses like innovation, regulation then limits a firm's ability to increase efficiency and output, and thus TFP. Finally, regulation can create barriers to entry that reduce competition between firms. And without competition, a profit-maximizing firm may not be incentivized to innovate and increase its TFP to maximize profit (Bloom, Draca, and Van Reenen 2016; Syverson 2004; Schmitz 2005).

The available empirical evidence suggests that regulation's effect on productivity can help explain industry-level trends over fairly long time

horizons. For example, the regulations issued by the Occupation Safety and Health Administration and the Environmental Protection Administration (EPA) have been found to reduce productivity growth in the typical manufacturing industry by 0.44 percentage point per year, accounting for over 30 percent of the productivity slowdown in the 1970s (Gray 1987). These estimates are higher than others that look at industries beyond manufacturing (Denison 1979; Portney 1981; Norsworthy, Harper, and Kunze 1979; Christainsen and Haveman 1981; Crandall 1981). But they are in line with or smaller than results found studying pollution control expenditures (Siegel 1979), changes in productivity in the electric utilities sector from emissions regulation (Gollop and Roberts 1983), and the impact of occupational safety and health and environmental regulations on the rate of productivity growth in Quebec between 1985 and 1988 (Dufour, Lanoie, and Patry 1998).

Additional evidence from the implementation of the Clean Air Act suggests that regulation harms productivity. The act's stricter air quality regulations are associated with an almost 2.6 percent decline in TFP for manufacturing plants, though the impact of regulations specifically governing ozone is particularly large (Greenstone, List, and Syverson 2012). After controlling for confounding price increases, output declines, and sample selection biases, TFP decreases an estimated 4.8 percent due to the Clean Air Act, which is equivalent to roughly $21 billion (in 2010 dollars) annually, or about 8.8 percent of the manufacturing sector's profits during the relevant period.

Although most contributions to the literature assessing the relationship between regulation and productivity have focused on environmental regulation, other types of regulation have also been shown to decrease productivity. For example, the Sugar Acts of 1934, and their repeal in 1974, illustrate how the rise and fall of regulation can influence productivity—productivity within the sugar industry appears to decline upon the introduction of these regulations and to rise upon their repeal (Bridgman, Qi, and Schmitz 2007, 2009).

Other research exploits variations across the OECD countries to examine the effects of regulations on growth and productivity. In a panel of OECD countries, Bourlès and others (2013) find that anticompetitive, upstream regulation in advanced economies causes a decrease in productivity in high-technology sectors. An analysis of OECD countries by Barone and Cingano (2011) suggests that less regulation leads to an increase in the value added to the economy by private firms. Nicoletti and Scarpetta (2003, 26) find "empirical results [that] seem to suggest sizable benefits from further progress in reforming the regulatory environment and in reducing the role of the state in business activities"—at least in part because of the productivity channel.

In addition, regulation-caused delays in bringing products to market can lead to decreases in investment in sectors with intensive research and development that may be disproportionately likely to generate productivity-enhancing innovations. For instance, policies limiting government uncertainty

about regulatory approval in the pharmaceutical drug context could have led to a more than doubling of medical research and development and could increase the current share of healthcare spending by more than 3 percent of GDP (Koijen, Philipson, and Uhlig 2016).

Employment

The impact of regulation on employment is, in theory, ambiguous. The burden imposed on businesses may decrease the number of individuals employed. But one can also imagine that compliance burdens may have an ambiguous employment effect—if a firm is required, for instance, to hire new employees in order to comply with new regulations. Indeed, some research has found little effect of regulation on employment. However, other research suggests that regulations can decrease employment, and some research even shows that deregulation can specifically increase employment.

Some of the evidence indicates that, in certain circumstances, the employment effects of regulation may be lesser in magnitude than one would expect on the basis of the overall burden imposed by a new regulation on business. For instance, Berman and Bui (2001a) find that though the particular regulations they study do impose large costs, the air quality regulations enacted by the South Coast Air Quality Management District, which includes and surrounds Los Angeles, have an effect on employment that is lesser in magnitude than the overall burden imposed on businesses. They find similar results regarding employment and larger effects of regulation on abatement investment when looking at oil refineries (Berman and Bui 2001b). These results are consistent with what one would expect if the regulations compelled firms to reallocate resources away from their most productive use and toward a less productive but labor-intensive use—the drop in employment is lesser in magnitude than the drop in productivity.

Other research, however, finds an effect of regulation on employment (List et al. 2003). For example, as a result of the Clean Air Act, pollutant emitters in counties above a certain standardized pollutant level are subjected to stricter regulatory oversight. These highly regulated counties, relative to less regulated ones, lost close to 590,000 manufacturing jobs (Greenstone 2002). As a result of the same act, the strengthening of emissions standards led to a 15 percent decline in the size of the newly regulated, pollution-generating sector within 10 years (Walker 2011).

A period of deregulation undertaken in Portugal directly addresses the effects of deregulation rather than increases in regulation on employment. Analyzing this period in Portugal, Branstetter and others (2014) document evidence of gains in employment and firm formation. They estimate that gains accrue disproportionately to small businesses and to businesses in bricks-and-mortar, low-technology sectors, such as agriculture, construction, and retail. These results are consistent with a standard model of regulation as a

fixed cost—the type of cost that larger firms can shoulder, but that drive small firms out of business or prevent them from entering in the first place. Small businesses suffer more from the costs of regulation, Branstetter and others' (2014) results show. Portugal's experience also demonstrates the benefits of deregulation for employees as well as business owners; Fernandes, Ferreira, and Winters (2014) document that Portugal's deregulation increased the returns to skills as well as the returns to the possession of a university degree. To deregulate, this evidence shows, is to unleash the economic potential of employees and owners alike.

Labor Mobility

Regulations also are imposed at the State and local levels. When such regulations differ across localities or States, they can have a negative effect on labor mobility, making it difficult for labor supply to respond to geographic differences in labor demand. Examples of such regulations include those pertaining to land use and occupational licensing. Because regulatory barriers to labor mobility undermine labor's capacity to be allocated toward its most efficient use, regulations of this type can have nontrivial macroeconomic effects.

Land-use regulations govern the private uses of land resources and include housing codes, zoning ordinances, and building codes. In cities experiencing high growth and productivity, land-use regulations often restrict housing availability, increasing housing prices and limiting the number of potential employees who can respond to the high labor demand. Exploiting variance in construction costs across housing markets, researchers use the ratio of price-to-minimum profitable construction cost to identify the impact of regulatory construction constraints. A higher ratio indicates that the price of the house cannot be explained by its physical construction costs and may be accounted for by the regulatory burden imposed. In 2013, 26.4 percent of a sampling of single-family houses were priced above minimum profitable production costs by more than 25 percent. When looking at production costs at a metropolitan-area level to account for unobserved variation, only three markets reported median ratios of greater than 2, while 11 percent reported ratios between 1.25 and 2. In comparison, in 1985, over 90 percent of metropolitan areas reported median ratios near or below 1, meaning that the share of the median price-to-cost ratios by area that were above 1.25 increased from 6.4 percent in 1985 to 15.4 percent in 2013. These high ratios suggest that physical construction costs cannot explain rising housing prices and instead point to the role of regulation in limiting the supply (Gyourko and Molloy 2014; Glaeser and Gyourko 2017).

In an efficient allocation of labor, potential employees will move from low-productivity regions to seek better opportunities in higher-paying, higher-productivity regions (Ganong and Shoag 2016). If people are unable to move to higher-productivity cities, low-productivity cities will have too many workers, leading to overall lower aggregate employee output across all U.S. cities.

Indeed, between 1965 and 2009, labor misallocation due to housing supply constraints ended up lowering aggregate growth by almost 50 percent (Hsieh and Moretti 2017). In addition to limiting aggregate employment inflows by limiting the housing supply, housing prices that are rising in productive areas due to regulation can then further deter low-skill migration by pricing houses above low-skill employees' budgets, leading to increased segregation based on skills (Ganong and Shoag 2016). American workers' proclivity to move is at an all-time low (see chapter 3), implying that they are increasingly unlikely to relocate in pursuit of labor market opportunities. Policy solutions to address this weak mobility could include adjustments to land-use regulations that would lower the price of housing and encourage a more robust alignment of employees with jobs.

Occupational licensing is another geographically based regulation that has an impact on labor mobility by varying licensing requirements by each State. Occupational regulation generally requires individuals to file registration paperwork, acquire certification, or receive a license, often referred to as "the right to practice" (Kleiner and Vorotnikov 2017). All forms of occupation regulation can involve costs, but occupation licensing is typically the most intense form of regulation, given that governments evaluate the legal qualifications of a given potential employee. Licensing laws make it illegal to practice a given occupation without a license.

For example, California's Board of Barbering and Cosmetology requires 1,600 hours of education and hands-on training to take a licensing test for cosmetology. An additional 3,200 hours of apprenticeship and 220 hours of related training are required for licensing. The adjacent State of Oregon requires 1,450 hours of education and training for hair design licensing and 350 hours for nail technology, along with 150 hours of safety or infection control training and 100 hours of career development at a State-licensed career school. All potential licensees must then pass a practical examination at one of these schools. A California-certified cosmetologist is not authorized to practice in Oregon without receiving Oregon's certification, creating a barrier to mobility.

The share of the U.S. workforce in a licensed profession has steadily increased. In the 1950s, less than 5 percent of the workforce was licensed, compared with about 18 percent in the 1980s. By 2000, this had grown to at least 20 percent; and in 2003, more than 800 occupations required licensing in at least one State (Kleiner and Krueger 2013). In 2008, 35 percent of employees across the United States were either licensed or certified by the government, with 29 percent being licensed. A total of 85 percent of licensed employees were required to take an exam, while almost 70 percent were required to take continuing education courses (Kleiner and Krueger 2013).

Occupational licensing requirements impose both direct and indirect costs, discouraging labor mobility by creating barriers to entry. For example, if the costs of becoming licensed in a new State is less than the expected returns

from moving, people will not relocate. A recent study found that greater regulatory harmonization affecting the accounting profession across the European Union's member countries led to increased international labor migration in comparison with other professions (Bloomfield et al. 2017). In the United States, occupations that experienced a decline in employment from 1990 to 2000, such as librarians and dietitians or nutritionists, faced a larger decline in States where the occupations were licensed (Kleiner 2006). As with land-use regulation, this lack of mobility creates inefficiencies by preventing workers from moving to high-productivity areas.

These barriers to entry also create wage differences between licensed and unlicensed employees. As both Adam Smith and Milton Friedman observe in their descriptions of economic markets, occupational licensing creates barriers to entry by imposing a quantity restriction on the labor supply that in turn increases wages. An opposing view implies that wages increase because licensing imposes a quality restriction on the labor supply, meaning that the higher wage in this case reflects higher-quality employees. Although the evidence is not clear on the quality or quantity driver in increasing wages, there is strong evidence that wages increase as a result of licensing (Kleiner and Krueger 2013; Gittleman and Kleiner 2016). And though wage increases can signal a strong economy, wages that are artificially raised for some can come at the cost of other employees losing their jobs or being excluded from the local labor market.

The Trump Administration's Initiatives

The Trump Administration has committed to reducing the burden of regulation on the U.S. economy through the elimination of inefficient, duplicative, and obsolete regulations that prevent beneficial economic activity. Rather than suppressing the innovation and entrepreneurship that are central to America's economic growth, regulatory policy should instead simply administer the law with respect for due process and fair notice. Toward this end, in 2017 President Trump issued four EOs directing agencies to review current regulations. The first, EO 13771, instructed agencies to repeal two regulations for every new regulation and to ensure that the total incremental cost of all new regulations does not exceed zero. EO 13772 provided core principles for regulating the U.S. financial system that emphasized the priority of empowering individuals to make informed, independent financial decisions. EO 13777 required agencies to review all existing regulations in order to highlight excessive regulation. And finally, EO 13783 focused on energy regulations, requiring agencies to review existing regulations that potentially burden the development of domestically produced energy resources. These orders have led to the identification of economically beneficial deregulatory opportunities as well as a more careful

examination of future regulations, as is evident in the Fall 2017 Unified Agenda of Federal Regulatory and Deregulatory Actions.

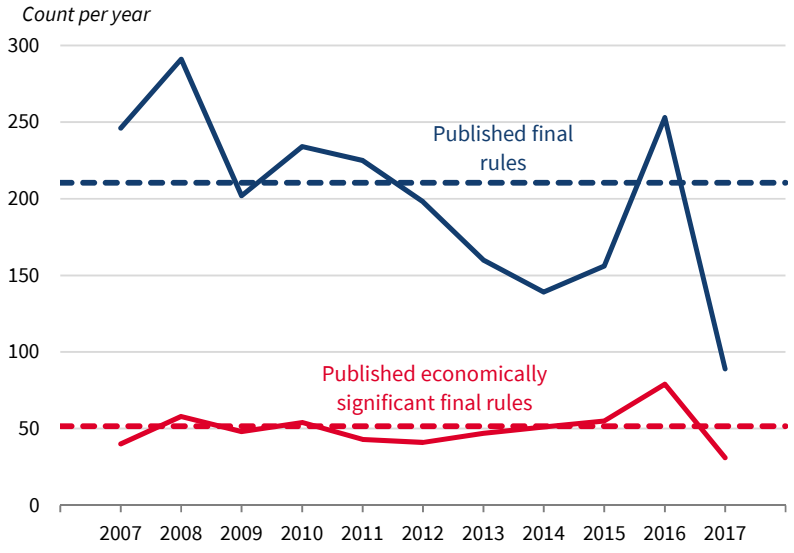
The Unified Agenda—which is published by the Office of Information and Regulatory Affairs, a unit of the Office of Management and Budget—provides transparency to the public regarding anticipated Federal regulatory and deregulatory policy. In this agenda, more than 60 cabinet, executive, and independent agencies compile information on upcoming rules, long-term actions, and completed actions. The Fall 2017 Unified Agenda reports that agencies withdrew 635 proposed actions that had been included in the Fall 2016 Unified Agenda. In the Fall 2017 Agenda, agencies also reclassified another 944 active actions from the Fall 2016 Agenda as long term (700) or inactive (244). Inactive regulations include those that are still being reviewed or considered. All these actions reflect the Administration's commitment to meaningful consideration of regulations.

Of the new proposed rules and rules already under review, the Administration published only 89 final rules (figure 2-6), about 42 percent of the average number of final rules published annually during the past 10 years.[1] Though these averages are inflated due to the fact that many administrations substantially increase regulation in their last year in office, the number of final rules published in 2017 is still about 46 percent of the average, when the counts for the years 2008 and 2016 are removed. Many administrations also see a decline in regulation in their first year. Still, the 2017 decline in the annual number of economically significant rules published was the largest percentage decrease since 2007, with 61 percent fewer than the previous year. The total number of published final rules also fell at a faster rate than any other year since 2007, signaling a dedication to eliminating excessive regulation.

The Fall 2017 Unified Agenda also outlines the regulatory goals for FY 2018 that reflect the regulatory outlook of the Trump Administration. For example, the Department of the Interior intends to finalize 28 deregulatory actions, leading to a reduction in costs of more than $1 billion (in net present dollars). The Bureau of Land Management, a part of the Interior Department, has proposed repealing rules regulating hydraulic fracturing that duplicate State regulatory efforts. The Department of Labor plans to streamline its approval process for apprenticeship programs to help workers looking to participate in such programs. The Department of Transportation plans to issue a rule that would give passenger railroads increased flexibility in designing trains, including easing the regulatory burden for high-speed rail operation, which would increase competition in the passenger train market. These deregulatory initiatives are likely to reduce unnecessary burdens on individuals, businesses, and State and local governments.

[1] Because the Office of Information and Regulatory Affairs frequently updates its data on its website, www.reginfo.gov, these counts are estimated as of February 9, 2018.

Figure 2-6. Final and Economically Significant Rules, 2007–17



Sources: RegInfo; Office of Management and Budget.

In his first EO, 13771, addressing regulation, President Trump instructed administrative agencies to consider whether earlier regulations are unnecessary before creating new ones by repealing two prior regulations for every new regulation. For example, the Department of Housing and Urban Development recently announced a top-to-bottom review of its manufactured housing rules to evaluate whether the compliance costs of these rules are justified given the shortage of affordable housing. By requiring the removal of two regulatory actions to offset the implementation of each new regulatory action, the "two-for-one rule" limits future regulatory costs. In this way, agencies can ensure an overall outcome of zero net costs, or even cost savings.

Both Canada and the United Kingdom have implemented similar processes for administrative rulemaking. In 2012, Canada enacted a "One-for-One" for regulatory requirement, while the United Kingdom imposed a "One-In, One-Out" rule beginning in January 2011. Between 2012 and June 2014, Canada removed 19 regulations, reducing the annual burden on businesses by over C$22 million. Meanwhile, the U.K. government's statistics suggest that its initiative reduced business burdens by £963 million, and it has since changed the rule to "One-In, Three-Out" through 2020 (Renda 2017). The academic literature on the effectiveness of such efforts is limited, and both governments have documented mixed results.

In complying with EO 13771, U.S. agencies outperformed the two-for-one goal by issuing 67 deregulatory actions while only enacting 3 new regulatory actions, a ratio of 22:1. These actions achieved $8.1 billion in cost savings

in present value terms, or $570 million per year. The Administration aims to continue its deregulatory agenda in 2018, with Federal agencies planning to complete four deregulatory actions for every new regulatory action. Agencies anticipate that this will save $9.8 billion, or $686.6 million per year in every year that agencies adhere to the 2018 regulatory cost caps.

In response to EO 13772—which was signed on February 3, 2017—the Department of the Treasury has issued three reports and plans on issuing a fourth. The first report was released on June 12, 2017, and discussed regulation pertaining to the depository system, banks, savings associations, and credit unions of all sizes, types, and regulatory charters (i.e., the Banking Report). The second report was released on October 6, 2017, and discussed regulation pertaining to capital markets, including debt, equity, commodities and derivatives markets, central clearing, and other operational functions (the Capital Markets Report). The third report was released on October 26, 2017, and discussed regulation pertaining to the asset management and insurance industries, and retail and institutional investment products and vehicles (the Asset Management and Insurance Report). The final report will discuss the regulation of nonbank financial institutions, financial technology, and financial innovation.

The Banking Report outlined five reforms key to achieve a less burdensome regulatory system: improve regulatory efficiency and effectiveness by evaluating duplicative regulations across numerous agencies; better align the financial system to support the U.S. economy; reduce the regulatory burden by decreasing unnecessary complexity; tailor the regulatory approach to firms' size and complexity and better coordinate these efforts across regulations; and align regulations to support market liquidity, investment, and lending.[2] The report also makes specific recommendations to improve legislation, regulations, and policy that run counter to President Trump's core principles outlined in EO 13772. In keeping with these principles, therefore, the report emphasizes the need to refine, consolidate, and better define financial regulations across agencies to reduce the outsized costs imposed on smaller banks and create a more harmonized financial regulatory environment. As of December 2017, the Senate is considering legislation to raise the threshold to which many of the more onerous banking regulations apply.

The Capital Markets Report provides specific recommendations for changes in legislation, regulation, and policy in order to support U.S. capital markets. Recommended changes are intended to promote access to capital for

[2] The depository system is affected be regulations issued by, among others, the Financial Stability Oversight Council, the Board of Governors of the Federal Reserve System, the Office of the Comptroller of the Currency, the Consumer Financial Protection Bureau, the Securities and Exchange Commission, the Federal Deposit Insurance Corporation, the Commodity Futures Trading Commission, the Federal Housing Finance Agency, and the National Credit Union Administration.

all types of companies, including small and growing businesses, by reducing regulatory burdens and improving market access; fostering robust secondary markets in equity and debt; appropriately tailoring regulations on securitized products to encourage lending and risk transfer; recalibrating derivatives regulation to promote market efficiency and effective risk mitigation; enabling proper risk management for central counterparties and other financial market utilities in recognition of the critical role they play in the financial system; rationalizing and modernizing the U.S. capital markets regulatory structure and processes; and advancing U.S. interests by promoting a level playing field internationally.

The Asset Management and Insurance Report provides specific recommendations for changes in legislation, regulation, and policy in order to support the U.S. asset management and insurance industries. Recommended changes are intended to promote efficient regulation by adopting a principles-based approach to liquidity risk management rulemaking for registered investment companies; instituting a "plain vanilla" rule for exchange-traded funds that allows new entrants to avoid the cost and delay of obtaining individual exemptive orders; modernizing shareholder reports to permit the use of implied consent for electronic disclosures; realigning the Federal Insurance Office around five pillars, including the promotion of the U.S. State–based insurance regulatory system and the U.S. insurance sector; recommending that the Federal Reserve Board leverage the information that is received by State insurance regulators and the National Association of Insurance Commissioners from savings and loan holding companies, and recommending that the Federal Reserve Board harmonize its financial reporting and recordkeeping requirements with corresponding State regulatory requirements; encourage the States to expeditiously pass uniform legislation regarding data security and breach notifications for insurers; and improving coordination and collaboration among federal agencies and State insurance regulators on insurance issues.

On February 24, 2017, President Trump signed EO 13777, which requires Federal agencies to review all existing regulations and identify and revise those that meet criteria to isolate inefficient regulations. These include regulations that eliminate jobs, that are outdated or ineffective, that impose costs in excess of their benefits, that interfere with other regulatory reform initiatives, or that are the result of since-rescinded EOs. Agencies are asked to make recommendations regarding these regulations and consider combining overlapping regulations. For example, the Department of Defense identified approximately 500 regulations that are subject to review under EO 13777 and that apply to everything from real estate to flood control. A notice of these regulations was then published in the *Federal Register*, providing the public with the opportunity to comment on their effectiveness. These regulations are now being reviewed by a Department of Defense task force, which will then offer recommendations to the Secretary of Defense in the coming year. With his approval,

these recommendations—including actions to repeal, replace, or modify these identified regulations—will be implemented.

Similar actions are taking place in other U.S. Federal departments. Each component within the Department of Homeland Security has designated a senior official to oversee their component's regulatory reform efforts and report to a task force that oversees the department's deregulation efforts. Like the Department of Defense, the EPA issued a *Federal Register* notice evaluating existing regulations and received over 460,000 public comments. The EPA also created a Regulatory Reform Task Force to coordinate public input with regulation recommendations.

The Trump Administration has also applied its deregulatory philosophy specifically to energy production. EO 13783 encourages energy independence by both promoting the clean and safe development of U.S. energy resources and avoiding unnecessary regulatory burdens. This EO requires agencies to review all existing regulations and similar agency actions that could burden the development or use of U.S. energy resources, including natural gas, coal, and nuclear energy resources. After review, agency heads have been required to submit recommendations that could alleviate or eliminate any unnecessary regulation burden on domestic energy production. As with EO 13777, these recommendations have included suspending, revising, or rescinding unnecessary regulations. For example, the "Waters of the United States" rule, which would have greatly expanded the purview of the Clean Water Act and imposed significant regulatory burdens on both America's farmers and ranchers and its energy producers, is also undergoing review and potential replacement.

In addition, the Administration has taken a number of steps to allow American firms to harness the economic value of America's coal reserves for themselves and for their employees. Pursuing the energy dominance agenda of EO 13783, the department also revoked a previous moratorium on new leases for coal production on Federal land—estimated by the U.S. Department of the Interior (2017) to produce about 40 percent of America's coal. Although there are many exacerbating factors besides changes in regulations, the coal industry has responded as expected. According to 2016 and 2017 data from the Energy Information Administration, coal mining employment increased 2.4 percent year-on-year from November 2016 to November 2017, and coal exports in the first two quarters of 2017 rose by more than 55 percent above their 2016 level.

The Department of the Interior has also worked to streamline the application and permitting process for oil and gas wells on Federal lands. In December, the Administration repealed a regulation covering hydraulic fracturing ("fracking") on federal lands, on the grounds that it was unnecessary, burdensome, and duplicative of existing State and some tribal regulations. Other efforts include an ongoing review of new regulations for venting and flaring natural gas at well sites located on Federal lands. Other mechanisms

have also addressed regulatory burdens—a Department of the Interior solicitor's opinion reversed Obama-era guidance on criminal penalties under the Migratory Bird Act, which removes a substantial risk for the development of wind energy resources.

Finally, fulfilling the pro-growth agenda envisioned in EO 13783, the EPA has taken multiple steps to evaluate and decrease its regulatory burden. In October 2017, the EPA proposed the repeal of the Clean Power Plan in order to alleviate the burden it would impose on America's job creators and consumers (EPA 2017). The EPA estimates that this plan's repeal could lower compliance costs in 2030 by as much as $33 billion, with these cost savings passed along to businesses and consumers in the form of lower electric bills.

As part of the review process for EO 13783, and in coordination with efforts to address EO 13777, the EPA has also identified four key initiatives to reduce the unnecessary burden of these regulations: comprehensive New Source Review reform, National Ambient Air Quality Standards reform, evaluation of the employment effects of EPA regulations, and a sector-based regulatory outreach program. Specifically addressing EO 13783, the EPA created its Smart Sectors program to better coordinate its efforts with industry stakeholders on regulatory developments, with the understanding that smart regulation requires improved relationships with the regulated community. For example, as part of Smart Sectors, EPA sector liaisons are focusing on building relationships with sectors and improving customer service for them, improving expertise vis-à-vis industry's specific factors, and using this information to better inform future regulatory directions. The overall goal is to engage stakeholders early in the development of policy through collaborative problem-solving—an approach that will improve environmental outcomes.

Along with EO 13783, this Administration has encouraged energy development by facilitating the construction of the Keystone XL pipeline, which would transport Canadian crude oil to U.S. refineries. In March 2017, the U.S. Department of State issued a Presidential permit to TransCanada, which enabled construction of the pipeline to proceed. This permit is necessary for the construction, connection, operation, and maintenance of facilities exporting or importing petroleum products between the United States and foreign countries. Though the Keystone XL Pipeline is far from complete, and regulatory hurdles at the State level remain, the final Presidential permit removed a cloud of uncertainty that had surrounded the project.

Through this Administration's efforts, including its EOs and Federal agencies' resulting actions, it has taken steps to reduce economically inefficient regulation. The Administration's EOs discussed above require regulators to critically examine both existing and potential regulations. With the adoption of task forces and programs such as Smart Sectors, agencies are actively seeking to remove costly regulations and create new, beneficial regulations with the assistance and knowledge of field experts. The effects of this work are already

evident, with the significant slowing down of proposed regulations and increasing deregulatory efforts. In the coming year, the effects of the Administration's actions will continued to be felt, given that many agencies have only begun suspending, revising, or rescinding unnecessary regulations.

Conclusion

Government regulation pervades the lives of ordinary Americans, making an impact on decisions made by both firms and individuals. Regulations have intended benefits, along with expected and unexpected costs. Though individual regulations may be expected to generate net benefits when imposed, the economics literature contains a multitude of studies providing evidence that individual regulations can generate unexpected costs that are larger than the realized benefits. These costs accrue in the form of dampened growth, diminished capital formation, stunted business dynamics, hampered productivity, decreased employment, and lower labor mobility. As regulation in the United States has marched upward in recent years, many of these maladies have been manifested in the U.S. economy.

The Trump Administration, however, has prioritized the elimination of unnecessary regulations in the U.S. economy. The Administration's specific and far-reaching actions will ensure that only those rules that provide benefit in excess of their costs will be imposed on Americans. The record of the Administration's first year reflects these efforts, because the number of deregulatory actions that eliminate unnecessary and harmful regulations exceeds the number of new regulations. These actions will reduce the costs imposed on America's businesses and employees, significantly expanding economic opportunities.